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REPORT OF THE

THIRD MEETING OF THE PLANT PROTECTION COMMITTEE FOR THE SOUTHEAST ASIA AND PACIFIC REGION

Held in New Delhi, India
December 1959

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

COMMONWEALTH MYCOLOGICAL INSTITUTE
26 OCT 1960

Beginning in January 1955, reports of FAO meetings, held as part of the Program of Work of the then Agriculture Division, were issued in the present form and numbered chronologically within each calendar year.

Since the establishment of the Plant Production and Protection Division in January 1959 the serial annual chronological numbers refer to reports issued by this Division.

Reports of previous meetings of the Plant Protection Committee for the South East Asia and Pacific Region were issued as follows:

First Meeting	**Bangkok, Thailand**	**3 - 7 December 1956**
Second Meeting	**Kandy, Ceylon**	**2 - 7 December 1957**

Meeting Report
No. 1960/PL-7

REPORT OF THE THIRD MEETING

OF

THE PLANT PROTECTION COMMITTEE

FOR THE SOUTH EAST ASIA AND PACIFIC REGION

Held in

New Delhi, India

from

7-12 December 1959

Plant Production and Protection Division
Food and Agriculture Organization of the United Nations
Rome, Italy March 1960

-D-2648

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INTRODUCTION

The regional Plant Protection Committee, which was established in accordance with the Plant Protection Agreement for the South East Asia and Pacific Region, held its third meeting, through the courtesy of the Government of India, in New Delhi, 7-12 December 1959. The meeting was attended by representatives of nine governments. The South Pacific Commission was also represented by an observer. Nine general sessions and three sub-committee sessions were held. Excursions were arranged by the Ministry of Food and Agriculture of India to visit the Indian Agricultural Research Institute and the World Agriculture Fair. The delegates also had the opportunity of seeing four films featuring plant quarantine and pest control, produced by Australia, India and the United States.

At the opening session of the Committee meeting, Mr. K. R. Damle, Secretary of the Union Ministry of Food and Agriculture, welcomed the participants and expressed appreciation that New Delhi was proposed as the venue for the present meeting of the Committee. In reviewing the development of the Committee, Mr. Damle stressed that efforts in preventing the invasion and spread of dangerous diseases and pests must be pursued on a common plan of action and with coordination among the countries concerned. He was pleased to note that the Committee, in the execution of its task, has taken into account the requirements of international trade and scientific research, so as not to hamper research and unduly inconvenience trade and other interests. As India has about 320 million acres under cultivation and about 70 percent of its population dependent on land for living, India can neither afford to allow new pests and diseases to enter nor can the country allow itself to be a source of danger to other countries. To this end, Mr. Damle emphasized the continuing need for publicity and propaganda to educate people about the inherent dangers of unrestricted movement of plants and plant products and he regarded that the holding of the Committee meeting in New Delhi would help to focus attention on the importance of plant quarantine measures.

On behalf of the Director-General of FAO, Mr. K. A. Bennett, FAO Deputy Regional Representative in India, thanked the Government of India for the hospitality and courtesy extended to the Committee and for the excellent facilities placed at its disposal. In expressing satisfaction in the progress that the Committee has made, Mr. Bennett referred to the interest that governments outside the Region have given to this undertaking and he cited as an example the request for the establishment of a similar plant protection agreement for the Near East. He assured the Committee that the Director-General will value the opinions and suggestions of the Committee and will implement its recommendations to the maximum extent possible.

The Honorable Mr. S. K. Patil, the Union Minister for Food and Agriculture of India, then delivered the inaugural address in which he reaffirmed the essentiality of plant protection in any program of agricultural development aiming at freedom of a country from hunger and want, and expressed satisfaction at the function of the Plant Protection Committee in promoting collective and coordinated measures to keep out dangerous crop pests and diseases from the Region. India, during the last twelve years, has made efforts to reduce losses due to pests and diseases by establishing plant protection organizations, providing assistance to farmers, organizing large-scale campaigns against locusts, field rats and other pests, and disseminating information on pests and diseases and their control. However, the prevention of introduction of pests and diseases could only be undertaken by the government and the Government of India has fully lived up to this responsibility. Various steps have been taken to implement the requirements of the International Plant Protection Convention. Well equipped and staffed Plant Quarantine Stations have been established at major seaports and airports and more will be formed in the near future. Recognizing that the Committee has already accomplished a great deal of basic spade work in collecting and disseminating information, the Honorable Mr. Patil emphasized that the Committee should also be concerned with the coordination of national efforts. In conclusion, he assured the Committee that the report of its meeting will receive his best attention and he wished the Committee success in its deliberations.

On behalf of the visiting delegates and observers, Dr. T. H. Harrison, the Chairman of the Committee, briefly thanked the Government of India for inviting the Committee to meet in this lovely capital of a mighty country. He expressed gratitude to Mr. Damle for his gracious words of welcome and to Mr. Bennett for his assurance of the continued support of FAO. He extended special appreciation to the Minister for his presence and his inspiring inaugural speech. In noting the achievements that the Committee has made and in stressing the necessity of adequate quarantine measures, he cited as an example the codling moth which reached Australia from Europe long before plant quarantine was started. Now approximately 7.5 million rupees have to be spent each year for spraying, while the total annual expenditure on plant quarantine in Australia amounts to less than one million rupees. He also attributed the record yield of rice in Southern Australia to the freedom of diseases and pests as a result of rigid quarantine on the importation of rice seed.

PARTICIPATION IN THE MEETING

Delegations

Australia

T. H. HARRISON	Director of Plant Quarantine, Department of Health, Canberra, A.C.T.

Burma

KAUNG ZAN	Plant Pathologist, Department of Agriculture, Agricultural Research Institute, Gyogon, Insein

Ceylon

J. W. L. PEIRIS	Plant Pathologist, Department of Agriculture, Peradeniya

Federation of Malaya

AHMAD YUNUS	Entomologist, Department of Agriculture, Kuala Lumpur
W. P. TING	Plant Pathologist, Department of Agriculture, Kuala Lumpur

India

K. B. LAL	Plant Protection Adviser and Director, Locust Control, Directorate of Plant Protection, Quarantine and Storage 4/19, Ajmeri Gate Extension, New Delhi
H. G. PATIL	Member, National FAO Liaison Committee, New Delhi Village Koshad Hill P. O. Gholvad (W. Rly.), District Thana, Bombay
R. S. VASUDEVA	Head of the Division of Mycology and Plant Pathology and Joint Director, Indian Agricultural Research Institute, New Delhi
E. S. NARAYANAN	Head of the Division of Entomology, Indian Agricultural Research Institute, New Delhi

R. N. MATHUR	Chief Research Officer and Head of the Forest Protection Branch, Forest Research Institute, Dehra Dun
D. BAP REDDY	Assistant Director, Plant Quarantine, Directorate of Plant Protection, Quarantine and Storage, 4/19, Ajmeri Gate Extension, New Delhi
V. K. SUBRAMANYAM	Plant Quarantine Entomologist, Directorate of Plant Protection, Quarantine and Storage, Plant Quarantine Station, Bombay
T. B. LAL	Plant Pathologist, Directorate of Plant Protection, Quarantine and Storage, Plant Quarantine Station, Bombay
S. N. S. SRIVASTAVA	Plant Pathologist, Directorate of Plant Protection, Quarantine and Storage, Plant Quarantine Station, Madras

Netherlands

R. T. SIMON THOMAS	Entomologist, Agriculture and Stock Division, Department of Economic Affairs, Hollandia, Netherlands New Guinea
D. W. R. LOS	Agricultural Attaché, Royal Netherlands Embassy, New Delhi

Pakistan

G. YUSUF KHAN	Commercial Secretary, Pakistan High Commission, New Delhi

Thailand

KAHN JALAVICHARANA	Chief, Plant Industry Division, Department of Agriculture, Bangkok
SAKSIRI KIRTPREDI	Chief Quarantine Officer, Plant Quarantine Section, Department of Agriculture, Bangkok

Observers

Republic of the Philippines

SEVERO MARQUEZ	Chief, Plant Pest and Disease Control Division, Bureau of Plant Industry, Manila

South Pacific Commission

J. BARRAU	Executive Officer, Economic Development Section, South Pacific Commission, Noumea, New Caledonia

Thailand

W. F. SELLERS	Entomology Adviser, United States Operations Mission to Thailand, Bangkok

FAO Staff

K. A. BENNETT	Deputy Regional Representative for Asia and the Far East, Western Zone, New Delhi
L. LING	Chief, Crop Protection Branch, Plant Production and Protection Division, FAO, Rome
M. OHTO	Liaison Officer for the Far East, FAO, Rome
A. JOHNSTON	Regional Plant Protection Specialist, FAO Regional Office, Bangkok

Officers of the Meeting

Dr. K. B. Lal of India was elected Chairman of the Committee, in accordance with the provisions of the regional Plant Protection Agreement, to succeed Dr. T. H. Harrison of Australia. In accordance with Article II of the regional Plant Protection Agreement, Dr. Lal shall serve for a period of two years or until the first session of the Committee held after the expiration of the period of two years.

Mr. A. Johnston of FAO served as Technical Secretary.

A Drafting Sub-Committee and two Technical Sub-Committees were set up. They were composed of the following members :

Drafting Sub-Committee: T. H. Harrison (Chairman), Kahn Jalavicharana, D. W. R. Los, H. G. Patil, J. W. L. Peiris, G. Yusuf Khan.

Sub-Committee to consider regulatory measures: T. H. Harrison (Chairman), J. F. Barrau, Severo Marquez, D. Bap Reddy, Saksiri Kirtpredi, R. T. Simon Thomas, V. K. Subramanyam, W. P. Ting.

Sub-Committee to consider Appendix A of the Agreement : R. S. Vasudeva (Chairman), Kahn Jalavicharana, T. B. Lal, R. N. Mathur, E. S. Narayanan, J. W. L. Peiris, W. F. Sellers, S. N. S. Srivastava, Ahmad Yunus, Kaung Zan.

Acknowledgement

FAO gratefully acknowledges the courtesy extended by the Government of India, and especially the assistance provided by the many officials of the Ministry of Food and Agriculture, in particular Dr. D. Bap Reddy, who acted as liaison officer for the meeting.

PRESENT STATUS OF THE PLANT PROTECTION AGREEMENT

Since the second meeting of the Committee held in December 1957, the Governments of Pakistan and Burma have deposited the instruments of adherence. The present status of the Agreement is as follows :

Country	Date of Signature	Date of Ratification	Date of Adherence
Australia	27 Feb. 1956	Not required	
Ceylon	27 Feb. 1956	Not required	
United Kingdom	29 Mar. 1956	3 Dec. 1956	
*Laos	25 May 1956		
Netherlands	25 June 1956	19 July 1957	
*Indonesia	28 June 1956		
Portugal	2 July 1956	5 Sept.1957	
Vietnam	2 July 1956	Not required	
India	2 July 1956	Not required	
Thailand	-	-	26 Nov. 1956
France	-	-	20 Aug. 1957
Malaya	-	-	20 Nov. 1957
Pakistan	-	-	8 Jan. 1958
Burma	-	-	4 Nov. 1959

* Signatures subject to ratification

The Agreement entered into force on 2 July 1956 in accordance with the provisions of Article XI.

At the time of the third meeting of the Committee, the following twelve governments have become parties to the Agreement : Australia, Burma, Ceylon, France, India, Malaya, the Netherlands, Pakistan, Portugal, Thailand, United Kingdom, Vietnam.

The Royal Government of Laos proclaimed the regional Plant Protection Agreement as law on 5 May 1959, but the instrument of ratification has not yet been received by FAO.

The Committee was pleased to hear that the Government of the Republic of the Philippines will adhere to the Agreement very shortly.

PLANT QUARANTINE ACTIVITIES OF PARTICIPATING GOVERNMENTS

Australia

Australia, although not within the South East Asia and Pacific Region, as defined in the regional Plant Protection Agreement, has been making efforts to render its plant quarantine legislation more effective in many directions and has been engaged for some time in the preparation of lists of plant diseases and pests. A list of the more important noxious weeds in Australia and a list of crop diseases which might be seed-borne have been completed and would be of interest to those concerned with plant protection within the Region.

Territory of Papua and New Guinea. New plant quarantine regulations in conformity with the provisions of the regional Plant Protection Agreement have been formulated and published. Lists of plant diseases, pests and weeds are being revised to bring them up-to-date.

Burma

Since the last meeting of the Committee, there has been no material change in the plant quarantine organization. However, steps have been taken to amend the existing Plant Quarantine Ordinance in order to remedy its inadequacy. As a party to the regional Plant Protection Agreement, it is hoped that quarantine facilities will be soon expanded to meet the requirements specified therein.

A list of fungi of Burma was submitted to the Committee at its second meeting. Lists of insect pests and noxious weeds are now under preparation.

Ceylon

No material change in the Plant Protection Ordinance in relation to the importation of plants has been made during the last two years, because the Ordinance meets in general the requirements of the regional Plant Protection Agreement. The importation of important crops, such as rubber, coconut, citrus, cotton, cacao and sugarcane, is restricted in accordance with the provisions of the regional Plant Protection Agreement and with the recommendations of the Committee. The importation of certain crops, such as coffee and potato, is not yet restricted by law but regulations to this effect are being formulated.

A post-entry quarantine station has long been one of the important needs for plant quarantine. Appropriation for the construction of such a station has been made by the Government for 1959 and it is hoped that post-entry quarantine facilities, together with the required staff, will soon be available.

Federation of Malaya

Since the last meeting of the Committee in December 1957, practically no change has taken place in plant protection activities, legislation, organization and facilities in Malaya. However, changes are expected to be introduced very shortly.

Draft importation rules have now been completed and it is hoped that these rules will be approved by the Parliament and brought into effect early in 1960. The rules incorporate the provisions of the Plant Protection Agreement for the South East Asia and Pacific Region. Meanwhile the importation of all plants continues to be governed by the Customs Proclamation, Prohibition of Imports Order, 1946, and subsequent amendments, as reported at the first meeting of the Committee.

In 1960, funds will be made available for the construction of a building to house a fumigation chamber, which will permit the treatment of larger consignments, at the headquarters of the Department of Agriculture in Kuala Lumpur.

Under the training program, a plant pathologist of the Department of Agriculture will visit the East African Agricultural and Forestry Research Organization in Kenya to participate in a three-month phytosanitary course, which is scheduled to commence in January 1960.

India

Facilities. During the period from October 1949 to June 1957, Plant Quarantine Stations with necessary staff and facilities were established at the seaports of Bombay, Calcutta, Cochin, Madras and Visakhapatnam, and at the airports of Amritsar, Bombay, Calcutta, Madras and New Delhi. Since then further expansion of facilities has proved necessary to meet the increased international traffic of plants and plant products. Consequently, buildings have been constructed at the seaport and airport of Calcutta and at the Palam airport of New Delhi, and a glass house at Madras seaport. In addition, construction work is in progress at Cochin seaport, and a building will soon be constructed at Madras airport as well as glass houses at Bombay and Calcutta seaports.

During the past two years, four vacuum fumigation chambers of a capacity of 10 cubic feet each have been provided and six more of various sizes will be added, increasing the total number of fumigation chambers attached to the Plant Quarantine Stations to 22. The fumigation of imported American and West Indies cotton is being continued at the seaports of Bombay, Cochin and Madras and may be undertaken in the near future at the seaports of Calcutta and Kandla.

New Plant Quarantine Stations have been proposed, one for Kandla seaport and three on the Indo-West Pakistan land border. The establishment of similar stations on the northern and eastern land borders is also under consideration.

Legislation. Under the Destructive Insects and Pests Act of 1914, there exist specific rules in respect of Allium spp., berseem seed, citrus, cocoa and other species of Theobroma, coffee, American and West Indies cotton, cotton seed, unginned cotton, flax seed, Mexican jumping bean, potato, rubber, sugarcane, sunflower seed and unmanufactured tobacco. The rules governing the importation of American and West Indies cotton samples by air have been modified to permit their entry at the airports at Calcutta and New Delhi, in addition to the airports at Bombay and Madras. All imported samples must be fumigated on arrival, and the requirement of a fumigation certificate from the country of origin as previously provided has been waived.

Domestic quarantine, restricting the movement of potato from West Bengal and the movement of banana from Assam, Kerala, Orissa and West Bengal is now in effect, owing to the occurrence of potato wart (Synchytrium endobioticum) and the extension of distribution of bunchy top of banana.

List of pests and diseases. Additions to the lists of pests, diseases and phanerogamic parasites of agricultural importance in India were prepared and submitted to the present meeting. Lists of pests, diseases and weeds of importance to forestry were also submitted.

Netherlands New Guinea

Legislation. In order to meet the changed circumstances, as affected by the rapid increase in international traffic and the expansion of agriculture in Netherlands New Guinea, a new Ordinance in conformity with modern developments in plant quarantine and with the regional Plant Protection Agreement, was promulgated in the Gouvernementsblad 1959 No. 27. Under the Ordinance, a new decree of the Director of Economic Affairs, which contains detailed regulations governing the importation of plant materials, has been prepared. The decree gives special attention to important crops, such as banana, cacao, citrus, coconut,

coffee, potato, rice, rubber, sugarcane, sweet potato and taro, and it incorporates fully the provisions of the regional Plant Protection Agreement with regard to rubber and the recommendations of the Committee in respect to cacao.

Facilities. The plant quarantine station at Hollandia, the principal port of entry, has been put into use since the last meeting. Facilities for treatment, fumigation, post-entry quarantine and incineration are all available in this station.

Lists of plant pests and diseases. A list of plant pests has been recently prepared, enumerating all species known to occur in Netherlands New Guinea on plants. Because of the lack of a plant pathologist, it has not yet been possible to prepare a list of plant diseases.

Pakistan

In pursuance of the recommendations of the second meeting of the Committee, three officers of the Department of Plant Protection have been trained abroad in plant quarantine in order to improve the standard of the work in this field. Nevertheless the number of trained personnel in plant quarantine in Pakistan is still inadequate and steps are being taken to procure more training facilities for this purpose.

All governmental agencies and other institutions concerning the introduction of plant propagating material have been requested to observe the recommendation of the Committee made at its second meeting that participating governments, before importing propagating material from outside the Region, should examine first the possibility of obtaining suitable materials within the Region, and that participating governments should endeavor to meet requests from other countries within the Region for propagating materials.

Under existing plant quarantine legislation, inspection of ships or passengers' baggage are not being carried out, but consignments of restricted plant materials, like American cotton, are dealt with in the following manner. The shippers of such consignments must obtain permission from the Director of Plant Protection 15 days prior to the entry of the ship. After the ship anchors at the port of Karachi or Chittagong, the cargo is inspected in the shipholds and sprayed superficially. The wagons for carrying the cotton to the fumigation plinth are also sprayed before loading. Fumigation is done under tarpaulin. For materials other than restricted items, inspection is done in the port sheds.

The importation of plant materials by air is prohibited except with the prior permission of the Director of Plant Protection and accompanied by a phytosanitary certificate.

Reports submitted to the present meeting of the Committee include lists of major plant diseases, insect pests, weeds, and pests other than insects, mites and nematodes.

Republic of the Philippines

Legislation. Plant quarantine activities in the Philippines were initiated in 1912, following immediately the approval of the first plant quarantine law, known as Commonwealth Act No. 2145. That Act was subsequently replaced in 1914 by Act No. 2515 and in 1922 by Act No. 3027 which is currently in force. In addition to Act No. 3027, the Plant Quarantine Service operates also on the basis of the Agricultural Pest Quarantine Law (Act No. 3767 of 1930), Republic Act Nos. 925 and 1296, Commonwealth Act No. 585, and various plant industry Administrative Orders pertaining to foreign and domestic quarantines.

The importation of fruits and vegetables from certain specific countries and places is prohibited in order to prevent the introduction of the Mexican fruit fly (Anastrepha ludens), the Mediterranean fruit fly (Ceratitis capitata) and the Queensland fruit fly (Dacus tryoni). Plants and parts of plants of crops important to the Philippines may be imported only under permit and under certain restrictions.

Facilities. There are now 18 plant quarantine stations located in different ports of entry. Major quarantine activities are mainly carried out at Manila in Luzon and at Cebu in the Visayas, where most foreign ships call.

At these quarantine stations over 2,000 ships and about 2,000-3,000 aeroplanes are inspected annually. The number of parcels of imported plant materials inspected totalled about 3.5 millions during the period from 1954 to 1959.

Lists of pests and diseases. Lists of important insect pests, plant diseases and noxious weeds are annexed to the report submitted to the present meeting.

Thailand

At the second meeting of the Committee, it was reported that the Plant Quarantine Act and relevant Ministerial Regulations were being amended. During the process of amendment, however, it was found desirable to prepare a new draft in order to incorporate the many changes needed. The draft is nearly completed and it is hoped that it will come into effect in the near future.

The existing plant quarantine legislation is being amended to cover all the crops indicated in Appendix A of the regional Plant Protection Agreement. The proposed Quarantine Act provides for absolute prohibition, restriction, or free importation. Restricted plant materials may be imported only if a permit has been obtained in advance and only under certain specific conditions. Non-restricted material may be imported without a permit but is still subject to inspection.

During the last two years, two more plant quarantine stations have been established, increasing the total number of stations in the country to five. Four more officers have been added to the plant quarantine staff, all with University degrees in Agriculture. Two of them had been trained abroad in this field, and other two will receive similar training whenever opportunities arise.

United Kingdom

British Solomon Islands. In accordance with the provisions of the existing legislation, the importation of plants from a scheduled area, which includes all of South East Asia and Papua and New Guinea, with the exception of Bougainville, may be made only under permit. The importation of specified noxious weeds is prohibited. There is no specific prohibition in the use of plant material for packing. However, any plant material imported may be held for inspection and treated.

Lists of pests and diseases and noxious weeds have been submitted to the Committee at its second meeting and there are no additions to record.

Fiji. Although a revision of the present plant quarantine legislation is now in progress, there will be no substantial departure in principle from existing provisions. In the past, with the exception of a very few common food items, all plant materials could be imported only under permit issued by the Director of Agriculture. In practice, permits were consistently refused for quite a wide range of plants and it is now thought desirable that the regulations should be amended so that the list of prohibited plant materials will be clearly defined. The list will include all of the susbtantially important food and cash crops grown in the Colony, which may not be imported except by the Director of Agriculture for scientific purposes.

In effect, the new Plant Quarantine Regulations will place all imported plant matter in three quarantine categories :

(1) A few items for human consumption, which may be imported without permit but will be subject to inspection on arrival.

(2) All crops grown in the Colony of substantial economic importance, which may not be imported except by the Director of Agriculture.

(3) All other plant matter of any description, which shall be importable only under permit issued by the Director of Agriculture.

Packing materials of plant origin are included in the definition of "plant material" and their importation has been and will continue to be prohibited. When such material (except certain materials, for instance wood wool) is brought into the Colony, the goods are required to be unpacked at the port of entry and the hay or straw surrounding them is destroyed.

Lists of pests, diseases and weeds known to be present in the Colony have been submitted to the Committee at its second meeting.

Singapore. The Plant Import Rules, made under the Agricultrual Pests Ordinance, are in full accordance with the recommendations of the Committee. No changes in the plant protection organization, activities and facilities have been made since it was reported to the first meeting of the Committee in 1956.

There are no facilities in Singapore to prepare a complete list of plant pests and diseases, but the list of the Federation of Malaya would be largely applicable to Singapore.

Because of the very strong emphasis in horticulture and the cultural practices adopted, weeds are not generally considered a very serious problem. Lallang (Imperata cylindrica) may cause troubles to vegetables and young trees, and sensitive-plant (Mimosa invisa) can compete with young trees in some soils.

REPORT OF THE STANDING TECHNICAL SUB-COMMITTEE

Dr. T. H. Harrison, as Chairman of the Standing Technical Sub-Committee, reported the accomplishments made during the past two years in pursuance of the program established by the second meeting of the Committee and he attributed such accomplishments largely to the provision by FAO of a regional officer, with headquarters at Bangkok, to act as Secretary of the Sub-Committee, which was considered as indispensable to the satisfactory functioning of the Sub-Committee.

In reviewing the functions of the Sub-Committee, Dr. Harrison emphasized that the program adopted by the Committee was very broad in nature and that it would take years of work to complete. It was, therefore, necessary to determine priorities. He praised the work done by both Mr. Stahl and Mr. Johnston.

Mr. Johnston presented his report on the work of the Sub-Committee and invited comments from delegates on the relative importance and urgency of the various functions laid down. He stated that during 1958 and 1959 certain of the more important lines of work, outlined by the second meeting of the Committee, were given prior attention. These included : (1) collection of information on insect pests and diseases of economic importance not yet established in the Region, the information having been summarized in two preliminary lists circulated to participating governments; (2) collection of information on insect pests and diseases in the Region, the compilation of which is continuing; (3) summarizing of available information on weeds in the Region, a preliminary list of such weeds with their geographic distribution having been produced; and (4) establishment of an information service, under which items were circulated in the form of quarterly reports, information letters and technical documents.

In addition, Mr. Johnston reported that short visits had been made by him to the following territories in the Region : Burma, Federation of Malaya, India, Netherlands New Guinea, Pakistan, Republic of the Philippines, Singapore, Territory of Papua and New Guinea. Longer visits to carry out preliminary plant disease surveys, at the request of the Government of the United Kingdom, were made to the British Solomon Islands Protectorate, North Borneo and Sarawak.

MEASURES FOR REGULATING IMPORTATION AND MOVEMENT OF PLANTS AND PLANT PRODUCTS

The Committee recognized that detailed quarantine measures for the control of plants and plant products moving in international traffic must be formulated by individual governments in accordance with their resources. Nevertheless, it considered that uniform actions and standardized procedures are essential in order to achieve the objective of the regional Plant Protection Agreement for the common good. It is therefore hoped that its recommendations will be favorably considered and effectively implemented by the participating governments.

The Committee has so far made recommendations only in respect of certain crops of major importance generally throughout the Region. It proposed that necessary data on diseases and pests in respect of other crops like groundnuts (peanuts), pineapple, oil palm, tea, tobacco, and maize should be assembled before its next meeting.

The Committee reviewed the recommendations made by meetings in Singapore in 1954, in Bangkok in 1956 and in Kandy in 1957 and recommended the following modifications or additional precautionary measures. The Committee also considered quarantine measures for the movement of materials not previously covered.

Rubber. As an additional precautionary measure, all imported propagating material not used for budding and all packing material imported with it should be destroyed by burning.

Cacao. Because of the occurrence of the disease known as "cushion gall" in some parts of the Region and pending clarification of the cause of this disease, it is recommended that strictest precautions in moving planting material from areas where this disease occurs, should be taken.

Sugar cane. The Committee called special attention to the virus disease known as "grassy shoot" in India and to a somewhat similar disease in Thailand, and emphasized that certain diseases and insect pests are not generally distributed throughout the Region. For these reasons, the Committee recommended that distribution of sugar cane setts within the Region should be undertaken only after great care has been taken to ensure that the setts are free from insect pests and from diseases either known to be infectious or suspected of being so.

Coffee. Because seedlings may be moved from intermediate quarantine stations to countries within the Region, the recommendation made by the second meeting of the Committee was amended to read as follows :

"With the exception of a limited amount of selected clonal material or seedlings grown in an approved quarantine station, the importation of coffee propagating material should be restricted to seed which should be inspected, fumigated if necessary, and surface sterilized with a mercuric fungicide before being planted. The propagating material mentioned above may be imported into the Region only after being grown in an intermediate quarantine station, recognized for this purpose by the Standing Technical Sub-Committee referred to later in this Report."

Potato. The Committee endorsed the warnings given in the reports of its first and second meetings and took note of the outbreak of black wart (Synchytrium endobioticum) in the Darjeeling district of India. The Committee considered that there are grave risks of introducing serious potato diseases when bulk quantities of seed potatoes are imported from any country where these diseases are present.

It is, therefore, recommended that importation of seed potatoes should be restricted to those originating from countries or areas free from black wart, ring rot (Corynebacterium sepedonicum) and golden nematode (Heterodera rostochiensis) and that preferably also they be restricted to certified seed obtained from crops free from viruses except virus X. Otherwise, importations should be restricted to small quantities for the purpose of establishing new varieties under strictest quarantine control.

Consumption potatoes should be accompanied by a certificate that they have been grown in an area where the above three diseases are not known to occur.

Citrus. Serious virus diseases, some important fungus diseases and certain insect pests are not yet present in the Region. Propagating material therefore should not be imported into the Region except for scientific purposes under strict quarantine. Importation of fruit from countries, where fruit flies not present in the Region occur, should be prohibited unless fruit is certified by the exporting country as being grown in an area where these fruit flies are not known to exist or that the fruit has been treated to kill all fruit fly larvae.

Coconut. The recommendation of the second meeting of the Committee was amended to read as follows :

"The importation of all planting material from countries, within or without the Region, where diseases of possible virus origin, such as kadang-kadang, have been known to occur, should be prohibited. In view of the outstanding importance of this crop, the Standing Technical Sub-Committee was asked to obtain and distribute to participating governments a review of all available information on kadang-kadang and similar diseases. Meanwhile the importation of propagating material should be restricted to such quantities as can be introduced under strict quarantine control."

Rice. The recommendation of the second meeting of the Committee was amended to read as follows :

"In view of the fact that at least four virus diseases of the rice crop are known to occur outside the Region, apart from the varied distribution of diseases and some pests in countries within the Region and because many of the serious rice diseases are known to be seed-borne, the Committee recommended that importation of rice capable of germinating should be prohibited except in small quantities for scientific purposes and then only under strict quarantine control."

Sweet Potato. The Committee considered further the importance of this crop for subsistence purpose in a large section of the Region and endorsed the recommendations of its first meeting in this connection.

Taro. Because of the importance of taro and related plants, particularly Colocasia and Xanthosma, in the subsistence economy of some territories in the Region and because of the fact that some diseases of these crops, such as Phytophthora colocasiae, Pythium sp., and possible virus diseases, have not been found to be widely distributed in the Region, movement of propagating material of these aroids should be limited to small quantities for scientific purposes with strict quarantine precautions.

Soil and other packing media. The Committee reviewed plant pathogens known to have been carried in soil associated with plant material and recommended that all participating governments should prohibit the importation of soil and other unsterilized packing media.

Plant material carrying animal diseases. The Committee considered a submission from Fiji to the effect that there were risks of introducing serious animal diseases, like foot and mouth disease and rinderpest, to areas in the Region where these did not exist, when plant material was imported from infested countries.

The Committee found it difficult to suggest any practicable means of eliminating this risk which also exists when travelers from infested countries move to other countries. Nevertheless the Committee recognized the desirability of closer collaboration between animal and plant quarantine authorities in all countries.

CONSIDERATION OF APPENDIX A OF THE AGREEMENT

The Sub-Committee set up to study Appendix A of the Agreement (Destructive pests and diseases not yet established in the South East Asia and Pacific Region) considered a draft revision prepared by the Technical Secretary, which embodied amendments rendered desirable largely in the light of more adequate information now available regarding the incidence and distribution of the pests and diseases included in the Appendix. With certain modifications, the Sub-Committee adopted the revision which was approved by the Committee.

The revised list which embodies all the amendments introduced by the Committee at its three meetings is appendixed to this Report.

The Committee decided not to alter the title of the list, whilst recognizing that "establishment" of a disease or pest in a region was difficult to define precisely.

It must be emphasized that the list of pests and diseases which constitutes Appendix A of the Agreement is not intended to be exhaustive but includes only those pests and diseases which should be given special attention in the enforcement of plant quarantine measures.

SPECIAL PLANT QUARANTINE PROBLEMS

Packing Materials of Plant Origin

The Committee exhaustively reviewed the range of materials of plant origin used for packing in international trade and expressed concern that certain packing materials may carry serious pathogens and pests. It was recognized, however, that it would be necessary to examine carefully the economic implication of any suggested restriction on the use of such packing material and the practicability of providing suitable safe alternative materials. The Standing Technical Sub-Committee was requested to study this question before the next meeting.

Measures for Preventing the Introduction and Spread of Pests other than Insects, Mites and Nematodes

The Committee considered the threat to crop plants of various animal pests as enumerated by delegates from many countries and recognized that the importation of such pests could be intentional or accidental. It recommended that each participating government should take effective steps to ensure that before the intentional importation of any animal is permitted both plant and animal quarantine authorities should be consulted. To the extent that is considered necessary legislation should be strengthened to empower quarantine authorities to deal with accidental introduction of animals capable of causing serious damages to plants.

Weeds

The Committee considered the lengthy lists of weeds submitted by many governments either at the second meeting or subsequently, and also a compilation of weed species in the Region made by the Technical Secretary. While these provided much valuable data, it was recognized that whether a plant behaves as a weed depends upon many factors and that the difficulties involved in defining "weed" have been discussed many times before.

For general purpose, it was agreed that the characteristics of weeds included the following :

(1) Competition with crop plants for available water, nutrients and space thus reducing yields of the crops (example - nutgrass, Cyperus rotundus).

(2) Aggressive covering of cleared or semi-cleared lands (example - Lantana camara).

(3) Interference with water transport, irrigation and fish culture (example - water hyacinth, Eichhornia crassipes).

(4) Poisonous to livestock or humans (example - jimson weed, Datura stramonium).

(5) Competition with pasture plants (example - Mimosa).

The Committee recommended that with the object of reducing the spread of weeds within the Region or preventing their introduction into the Region, each participating government should examine the practicability of restricting the movement of plant materials containing weeds and introducing a system for inspection of seeds for sowing moving in international trade. In this connection due regard should be given to the International Rules for Seed Testing adopted by the International Seed Testing Association in 1953 and revised in 1956.

Methods of Inspecting and Treating Ships and Aircraft

The Committee considered that there was a real risk of introducing insect pests and disease-causing agents into countries in the Region by means of aircraft and ships and therefore recommended that each country should thoroughly examine what practical steps can be taken to reduce the risk to an absolute minimum.

In regard to aircraft, the Committee considered that the luggage compartment of all aircraft should be sprayed prior to departure with an internationally approved agricultural insecticide. As far as practicable the passenger compartment should also be sprayed prior to departure with such insecticides as are internationally approved for this purpose and the aircraft cabin closed for as long as possible prior to embarkation of passengers.

At intermediate ports stores of plant origin should be in secure lockers and all garbage should be destroyed by incineration. At terminal ports all such stores should be adequately dealt with by plant quarantine authorities to eliminate the risk of introduction of pests and diseases. In these connections plant quarantine authorities are urged to consult the recommendations of the International Civil Aviation Organization.

The Committee recognized that ships visiting ports for discharge of cargoes could carry plant diseases and pests in (a) plant material cargo being discharged, (b) plant material cargo destined for other ports and (c) ships' stores, and recommended that each country requires full compliance with plant quarantine safeguards by all Masters. In this regard, plant quarantine authorities should be authorized to carry out such inspections and to order such actions as are necessary to prorect their countries from pests and diseases. Special attention should be given when ships carry stored products in bulk or when packing materials of plant origin are found.

PROGRAM OF THE COMMITTEE FOR 1960-61

The Committee decided that the Technical Standing Sub-Committee set up by the first meeting should continue to function with a view to carrying on the activities of the Committee during the period between meetings. The following representatives of participating governments were designated as its members :

K. B. Lal (India)
G. Bouriquet (France)
T. H. Harrison (Australia)
Kahn Jalavicharana (Thailand)
Nguyen-Van-Dam (Vietnam)
J. W. L. Peiris (Ceylon)
Kaung Zan (Burma)

The Chairman of the Committee is to act as the Chairman of the Technical Standing Sub-Committee and A. Johnston of FAO as the Secretary.

The Committee reviewed the functions of the Technical Standing Sub-Committee as drawn up by the second meeting and decided that these functions should continue to form the basis of the activities of the Sub-Committee. It was recognized, however, that certain priorities had to be laid down. It was therefore decided that, as soon as is practicable, the Standing Technical Sub-Committee should study this question and draw up a list of priorities for guidance for the next two-year period.

GENERAL RECOMMENDATIONS

(Recommendations regarding regulatory measures required in plant quarantine enforcement are summarized under the headings of "Measures for regulating importation and movement of plants" and "Special plant quarantine problems".)

1. The Committee,

Recognizing that effective protection of plant resources of the Region depend mainly on the full participation in the implementation of the regional Plant Protection Agreement by the governments of all territories within the Region,

Considering that several governments of States situated in the Region or responsible for the international relations of territories in the Region were not yet parties to the Agreement,

Recommends that FAO and the South Pacific Commission make appropriate representations to all governments, which have not yet become parties to the Agreement, to consider as early as possible taking steps required for adhering to the Agreement.

2. The Committee,

Having been informed by FAO of the proposal of the Government of France to extend the area covered by the Agreement to include French Polynesia,

Noting that the matter was still the subject of communication between the Director-General of FAO and the Government of France,

Considering that in the interests of the territories within the Region it was highly desirable that the same plant protection precautions as provided in the Agreement should apply to French Polynesia,

Recommends that FAO take appropriate steps to achieve this result.

3. The Committee,

Having examined the special position of Singapore as a focal point for international trade in plant materials,

Considering that diseases and pests of special danger to the whole of the Region could be introduced via Singapore,

Recommends that FAO use its good offices to negotiate with the appropriate government or governments with the object of having Singapore introduce such plant quarantine legislation as is required for the fuller implementation of the regional Plant Protection Agreement.

4. The Committee,

Considering that adequately trained personnel were essential to effective plant quarantine administration,

Having reviewed existing facilities for the training of plant quarantine officers as mentioned in the report of the second meeting.

Emphasizing that there were training facilities available in certain countries such as the United Kingdom, the United States of America, India and Australia and that assistance in this connection might be obtained from FAO, U.S. International Cooperative Administration, Colombo Plan and possibly other sources,

Recommends that participating governments make fuller use of the facilities available to train adequate staff for their plant quarantine services.

5. The Committee,

Recognizing that the time available for its deliberations during the present session has not been sufficient for full consideration of all items requiring attention,

Considering that the agenda of future meetings are likely to be equally full and the information requiring attention is likely to be more extensive,

Recommends that the Director-General of FAO give consideration to extend the periods for future meetings.

6. The Committee,

Referring to Article II of the regional Plant Protection Agreement with regard to the convening of meetings of the Committee,

Recommends that the Director-General of FAO, in consultation with the Chairman of the Committee, convene the fourth meeting of the Committee in 1961.

APPENDIX

List of Destructive Pests and Diseases not yet Established in the South East Asia and Pacific Region (Appendix A of the Agreement), as Amended by the First, Second and Third Meetings of the Committee.

CACAO (*Theobroma cacao*)

		Known Distribution
Sahlbergella singularis Hagl.	Capsid bug causing die back	West Africa, Belgian Congo, Angola
Distantiella theobroma Dist.	Capsid bug causing die back	West Africa, Belgian Congo
Helopeltis bergrothi Reut.	Capsid bug causing canker	Africa
Stenoma decora Zell.	Cacao fruit and shoot borer	Brazil
Marasmius perniciosus Stahel	Witches' broom	West Indies, South America
Monilia roreri Cif.	Monilia pod rot	South America
Trachysphaera fructigena Tabor et Bunting	Trachysphaera pod rot	Africa
Swollen shoot virus complex	Swollen shoot	West Africa (certain strains occur in Ceylon; similar diseases probably also occur in Colombia, Venezuela and Java
Cacao red mottle virus	Red mottle	Trinidad
Cacao vein-clearing virus	vein clearing	Trinidad

CASSAVA (*Manihot esculenta*)

Phaeolus manihotis Heim.	Root rot	Madagascar
Cassava brown streak virus	Brown streak	East Africa, Southern Rhodesia, Nyasaland
Cassava mosaic virus	Mosaic	Africa, Brazil, Indonesia

CITRUS (*Citrus* spp.)

Anastrepha ludens (Loew.)	Mexican fruit fly	Mexico, Central America
Anastrepha spp., other than *A. ludens*	Fruit flies	America (tropical and warm regions)
Ceratitis capitata (Wied.)	Mediterranean fruit fly	Europe, Near East, Africa, W. Australia, Central and South America, Hawaii
Deuterophoma tracheiphila Petri	Mal secco	Mediterranean region
Citrus stubborn disease virus	Stubborn disease	California, Arizona
Citrus xyloporosis virus	Xyloporosis	Israel, Brazil, Texas, Florida (probably also in India)

COCONUT (*Cocos nucifera*)

Pachymerus nucleorum (F.)	Coconut borer	Brazil, Guiana, Paraguay
Pseudotheraptus wagi Br.	Coreid bug	East Africa, Zanzibar
Aphelencoides cocophilus (Cobb) Goodey)	Red ring disease	West Indies, Panama, Venezuela

COFFEE (*Coffea* spp.)

Antestia spp.	Pentatomid bug	Africa
Leucoptera caffeella (Guer.)	White coffee leaf miner	S. America, West Indies
Leucoptera meyricki Ghesq.	Coffee leaf miner	Africa
Planococcus kenyae (Le Pelley)	Mealy bug	East and West Africa, Belgian Congo
Omphalia flavida Maubl. et Rangel	American leaf spot	Mexico, U.S.A., West Indies, Central and South America
Trachysphaera fructigena Tabor et Bunting	Trachysphaera fruit rot	Africa
Gibberella xylarioides (Stey.) Heim et Saccas	Tracheomycosis	Africa
Coffee blister spot virus	Blister spot	Costa Rica

COTTON (*Gossypium* spp.)

Anthonomous grandis Boh.	Mexican cotton boll weevil	West Indies, Mexico, Central America, Venezuela, U.S.A.
Anthonomous spp.	Boll weevils	New World
Phymatotrichum omnivorum (Shear) Duggar	Texas root rot	Mexico, U.S.A.
Cotton leaf curl virus	Leaf curl	Africa

HEVEA RUBBER (*Hevea brasiliensis*)

Leptopharsa heveae Drake et Poor	Lace bug	Tropical America, Brazil
Dothidella ulei P. Henn.	South American leaf blight	Mexico, Central America, West Indies, South America
Pellicularia filamentosa (Pat.) Rogers	Target leaf spot	Central and South America

MAIZE (Zea mays)

Diatraea spp. esp. D. Saccharalis (F.)	Stalk borers	Southern U.S.A., Mexico, West Indies, Central America, South America (Certain species occur in the Region)
Sesamia cretica Lederer	Stalk borer	Africa, Mediterranean region
Xanthomonas stewarti (E. F. Smith) Dowson	Bacterial wilt	Canada, Mexico, Puerto Rico, U.S.A., Italy, U.S.S.R.

OIL PALM (Elaeis guineensis)

Pachymerus lacerdae (Chevr.)	Kernel borer	West Africa
Pachymerus nucleorum (F.)	Kernel borer	Brazil, Guiana, Paraguay
Pimelephila ghesquierei Tams.	A Pyralid	West Africa, Belgian Congo
Fusarium oxysporum Schlect.	Fusarium wilt	West Africa
Cercospora elaedis Stey.	Freckle	West Africa, French Equatorial Africa, Belgian Congo

PAPAYA (Carica papaya)

Papaya bunchy top virus	Bunchy top	Florida, West Indies

POTATO (Solanum tuberosum)

Leptinotarsa decemlineata Say.	Colorado beetle	North America, Europe
Corynebacterium sepedonicum (Spieck. et Kotth.) Skapt et Burk.	Bacterial ring rot	North America, Costa Rica, Venezuela, Europe, India

Synchytrium endobioticum (Schilb.) Perc.	Black wart	South Africa, Europe, North America, South America, Japan, India (West Bengal)
Heterodera rostochiensis Wr.	Golden nematode	Europe, U.S.A. (Long Island), Algeria, Israel, New Zealand
Oospora pustulans Owen et Wakef.	Skin spot	Canada, Australia, Norway, United Kingdom, Ireland, New Zealand
RICE (Oryza sativa)		
Diatraea spp.	Stem or stalk borers	Southern U.S.A., Mexico, West Indies, Central America, South America
Epholis pallida Pat.	Panicle disease	West Africa
Rice dwarf virus	Dwarf	Japan, the Philippines
Rice stripe virus	Stripe	Japan
Rice hoja blanca virus	White leaf (hoja blanca)	West Indies, Central America, South America, U.S.A.
Aphelenchoides oryzae	White tip	Ceylon, Japan, Taiwan, U.S.A.
SUGAR CANE (Saccharum spp.)		
Diatraea spp., esp. D. saccharalis (F.)	Stalk borers	Southern U.S.A., Mexico, West Indies, Central America, South America. (Certain species occur in the Region)
Sugarcane ratoon stunting virus	Ratoon stunting	Australia, Africa, Mexico, West Indies, Hawaii, Fiji, Central America, South America, U.S.A., Philippines, Taiwan

SWEET POTATO (Ipomaca batatas)

Xanthomonas vasculorum	Gumming disease	Australia, South America, Mexico, West Indies, Mauritius, Reunion, Madeira, Madagascar, South Africa, Indonesia
Sweet potato internal cork virus	Internal cork	U.S.A.
Sweet potato mosaic virus	Mosaic	East Africa, Belgian Congo (reported to occur in Ceylon)
Sweet potato dwarf virus	Dwarf	Ryukyu Islands

TOBACCO (Nicotiana spp.)

Pseudonomas tabaci (Wolf et Foster) Stevens	Wildfire	North America, Venezuela, Africa, Europe, Japan, China (Taiwan), Iran, Turkey
Peronospora tabacina Adam	Blue mold	Australia, North America, South America

TOMATO (Lycopersicum esculentum)

Tomato spotted wilt virus	Spotted wilt	Africa, Australia, New Zealand, Europe, South America, West Indies, North America, Hawaii, Papua-New Guinea

TUNG (Aleurites fordii)

Septobasidium aleuritidis Heim et Bour.	Branch canker	Madagascar